
IN THE CLAIMS

1. (Original) A method for generating single polarization output from a fiber laser comprising the steps of using a non-destructive technique to fabricate a Bragg grating within the fiber laser and forming the fiber laser at the grating position into a tight curve.
2. (Original) A method for generating single polarization output from a fiber laser as set forth in claim 1, wherein the fiber laser has a surface and the non-destructive technique for fabricating the grating comprises the steps of positioning a phase mask parallel to a length of the surface of the fiber laser and irradiating the phase mask and fiber laser with electromagnetic radiation.
3. (Original) A method for generating single polarization output from a fiber laser as set forth in claim 2, wherein the phase mask and fiber laser are irradiated with 334 nm electromagnetic radiation from a continuous wave argon laser.
4. (Original) A method for generating single polarization output from a fiber laser as set forth in claim 3, wherein the electromagnetic radiation from the argon laser is conditioned by at least one lens prior to irradiating the mask and fiber laser.
5. (Original) A method for generating single polarization output from a fiber laser as set forth in claim 2, wherein a glass slide is placed between the surface of the

fiber laser and the phase mask during fabrication of the grating to protect the phase mask from debris from the surface of the fiber laser.

5 6. (Original) A method for generating single polarization output from a fiber laser as set forth in claim 1, wherein the tight curve formed at the grating position is a complete loop in the fiber laser.

7. (Original) A method for generating a single polarization output from a fiber laser as set forth in claim 1, wherein the fiber laser is a neodymium (Nd) doped fiber.

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8. (Original) A method for generating single polarization output from a fiber laser as set forth in claim 1, wherein the irradiating step utilizes electromagnetic radiation between 320 nm and 340 nm.

15 9. (Original) An apparatus for generating single polarization output from a fiber laser comprising a Bragg grating fabricated within the fiber laser using a non-destructive technique and further comprising a tight curve formed in the fiber laser at the grating position.

20 10. (Original) An apparatus for generating single polarization output from a fiber laser as set forth in claim 9, wherein said fiber laser has a surface and said Bragg grating is fabricated by positioning a phase mask parallel to a length of the surface

of the fiber laser and irradiating the phase mask and fiber laser with
electromagnetic radiation.

5 11. (Original) An apparatus for generating single polarization output from a fiber
laser as set forth in claim 10, wherein the grating is fabricated by irradiating the
mask and fiber laser with 334 nm electromagnetic radiation from a continuous
wave argon laser.

10 12. (Original) An apparatus for generating single polarization output from a fiber
laser as set forth in claim 11, wherein the 334 nm electromagnetic radiation is
conditioned by at least one lens prior to irradiating the mask and fiber laser.

15 13. (Original) An apparatus for generating single polarization output from a fiber
laser as set forth in claim 10, wherein a glass slide is placed between the surface
of the fiber laser and the phase mask during fabrication of the grating to protect
the phase mask from debris from the surface of the fiber laser.

20 14. (Original) An apparatus for generating single polarization output from a fiber
laser as set forth in claim 9, wherein the tight curve formed at the grating position
is a complete loop in the fiber laser.

15. (Original) An apparatus for generating single polarization output from a fiber laser as set forth in claim 9, wherein the fiber laser is a neodymium (Nd) doped fiber.

5 16. (Original) An apparatus for generating single polarization output from a fiber laser as set forth in claim 9, wherein the fiber laser operates with electromagnetic radiation between 320 nm and 340 nm.

10 17. (New) A method for obtaining a single polarization from a fiber laser comprising the acts of:
fabricating a Bragg grating in the fiber laser non-destructively; and
increasing a differential loss between two polarizations, wherein the act of increasing comprises the act of tightly looping the Bragg grating.

15 18. (New) The method for obtaining a single polarization from a fiber laser as set forth in claim 17, wherein the fiber laser has a surface and the act of fabricating a Bragg grating comprises the acts of positioning a phase mask parallel to a length of the surface of the fiber laser and irradiating the phase mask and fiber laser with electromagnetic radiation.

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19. (New) The method for obtaining a single polarization from a fiber laser as set forth in claim 18, wherein the phase mask and fiber laser are irradiated with 334 nm electromagnetic radiation from a continuous wave argon laser.

5 — 20. (New) The method for obtaining single polarization from a fiber laser as set forth in claim 19, wherein the electromagnetic radiation from the argon laser is conditioned by at least one lens prior to irradiating the mask and fiber laser.

10 21. (New) The method for obtaining single polarization from a fiber laser as set forth in claim 18, wherein a glass slide is placed between the surface of the fiber laser and the phase mask during fabrication of the grating to protect the phase mask from debris from the surface of the fiber laser.

15 22. (New) The method for obtaining single polarization from a fiber laser as set forth in claim 17, wherein the tight loop formed at the grating position is a complete loop in the fiber laser.

20 23. (New) The method for obtaining a single polarization from a fiber laser as set forth in claim 17, wherein the fiber laser is a neodymium (Nd) doped fiber.

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24. (New) The method for obtaining a single polarization from a fiber laser as set forth in claim 18, wherein the act of irradiating utilizes electromagnetic radiation between 320 nm and 340 nm.
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